APPARATUS AND METHOD FOR CONTROLLING OPTICS PROPAGATION BASED ON A TRANSPARENT METAL STACK

ABSTRACT OF THE DISCLOSURE

A device and method of optics propagation and signal control integrated with micro-electro-mechanical-switches (MEMS). This device modifies optical transmission properties of a transparent multilayer metal stack by mechanically varying the thickness of an air gap between layers in the stack This is accomplished by utilizing MEMS coupled with the stack to change the optical path in a given layer of the transparent multilayer metal stack. This can be accomplished by developing a hybrid combination of transparent multilayer stacks and MEMS, wherein an air gap is used as one of the dielectric layers. The air gap thickness can be controlled by the MEMS device thereby enabling dramatic control of the optical path.

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